The 'Mythical' Datacomm Manager

Products and Services

	Presently Use	Plan to Add In Next 12 Months
Terminals	94.8%	53.6%
Modems	90.2%	49.9%
Printers	89.4%	45.7%
Communications software	62.1%	31.5%
Private line	57.2%	21.9%
Communications processors	47.4%	19.8%
Multiplexers	42.2%	28.8%
PABXs	41.7%	12.4%
Converters, (protocol, interface, etc.)	30.3%	28.7%
Diagnostic and test equipment	28 4%	14.9%
Carriers (common, value-added, packet-switching)	27.0%	17.6%
Local area networks	24.1%	28.1%
Base	1,421	864
	100%	100%

Number of Respondents by Job Title

	No. of Respondents	Percent
DP/MIS Operations		
DP/MIS Management	1,094	69.4%
DP/MIS Supervisory	132	8.4%
DP/MIS Staff	61	3.9%
Sub-Total	1,287	81.7%
Company Management		
General and Corporate Management	108	6.9%
Financial Management	104	6.6%
Administrative Services Management	66	4.2%
All Other	10	0.6%
Sub-Total	288	18.3%
Total Respondents	1,575	100%

the 1,539 who use or plan to use datacomm, 56.1 percent plan to add one or more of the 12 types of products/services.

Terminals (94.8 percent), modems (90.2 percent) and printers (89.4 percent) lead the list of most frequently cited datacomm equipment. They also lead the list of items to be added. Interestingly, local area networks which ranked 12th of the products and services in use jumped up to seventh among those to be added.

Those planning or using datacomm were asked to rate the importance of 12 factors when purchasing equipment or services. The top-ranked factor was the reliability of the product. It was closely followed by the product performing according to its specifications. Availability and speed of repair services came in third.

Price rated 11th on the list and whether or not the supplier can provide a complete system rated 12th. The appeal of advanced technology may be tarnishing somewhat as users search for viable solutions, not fancy ones. The supplier's reputation for advanced technology rated 10th.

In line with hoopla in the marketplace, those using datacomm were asked to indicate the extent that their company has started to integrate data with voice communications. Of the 1,440 users of datacomm, 99.3 percent answered the question.

Nearly 80 percent answered that they have little or no activity underway to integrate voice and data. Fifteen percent said they have moderate activity, although in companies with 1,000 or more employees, that figure moves up to 24.2 percent. Three percent of the respondents said they have extensive activity and 1.7 percent said they have completed the integration. (IN)

Types of Data Communications Systems Being Used

	Presently Have		Don't Have Now But Plan to Add In Next 12 Months		Total that Have or Plan to Add In Next 12 Months	
	No.	Percent	No.	Percent	No.	Percent
Local Systems (on-site, campus)	1,176	74.7%	133	8.4%	1,309	83.1%
Metropolitan Area Systems	496	31.5%	127	8.1%	623	39.6%
Long Distance Systems	859	54.5%	175	11.1%	1,034	65.6%
Total-One or More Systems	1,440	91.4%	338	21.5%	1,539	97.7%
Total Respondents	1,575	100%	1,575	100%	1,575	100%

Copies of the complete 200-page study are available for $295 from Hitchcock Marketing Research, Hitchcock Building, Wheaton, IL 60188. The study includes an Executive Summary, complete tabulated data and cross-tabulations by industry, company size, and types of datacomm systems used.

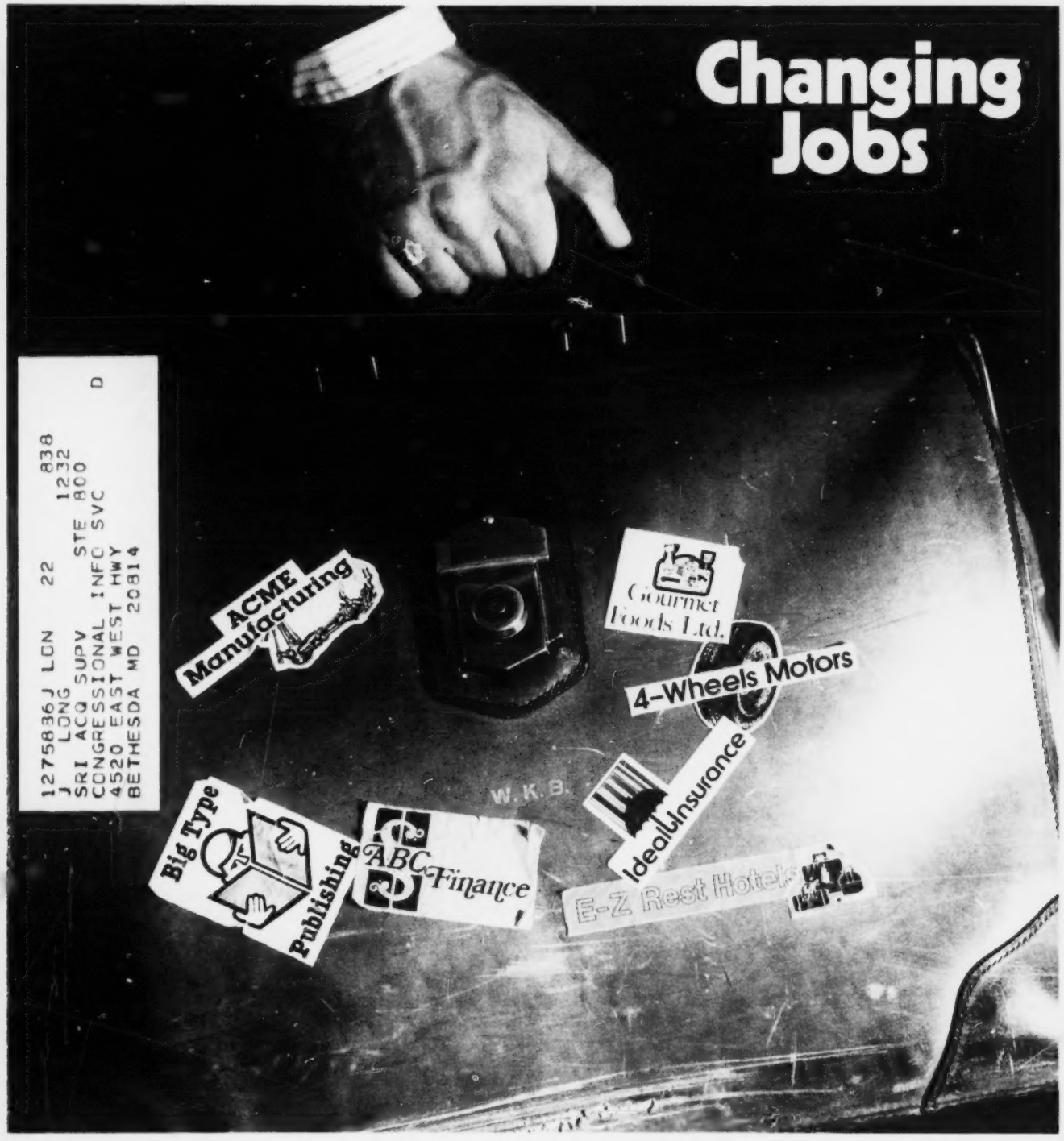
For an extra copy of this article, please enter No. 15 on the Reader Information Card.

A HITCHCOCK PUBLICATION

APRIL 1984

INFOSYSTEMS

THE MAGAZINE FOR INFORMATION SYSTEMS MANAGEMENT



14th Annual Micrographics Usage Survey | Training PC Users | The Information Trail

INFOSYSTEMS

April 1984 Volume 31 Number 4

Editor & Publisher
Wayne L. Rhodes, Jr.

Senior Editors
David H. Freedman, East
Wendy L. McKibbin, West
Frederick W. Miller, Midwest
Carol Tomme Thiel, Software

Production Editor
Mary Emrich

Assistant Editors
Karen Beagley Wendelin Colby

Editorial Assistants
Nancy Wyman Sandy Donovan

Founding Editor & Group Publisher
Arnold E. Keller

Marketing Manager
Bill Wilde

Sales Administrator
Ruth L. Batzer

Art Director
H. Dean Willis

Production Coordinator
Joyce McNeely

Contributing Editors
Lawrence Feidelman
President
Management Information Corporation
Cherry Hill, NJ

Bill Friis
President
M. William Friis Assoc.
Boston, MA

James Hannan
Editorial Director
Auerbach Publishers, Inc.
Pennsauken, NJ

Robert E. Johnston
Security System Specialist
Phoenix Mutual Life Insurance Co.
Hartford, CT

Arnold M. Kneitel
Systems Consultant
Polymer Products Department
E.I. duPont de Nemours & Co.
Wilmington, DE

Darryl Landvater
President
Oliver Wight Video Productions Inc.
Newbury, NH

Editorial Offices
Headquarters: Hitchcock Building
Wheaton, IL 60188, (312) 665-1000
110 Fulton St.
Boston, MA 02109, (617) 723-8970
1021 S. Wolfe Rd., Suite 275
Sunnyvale, CA 94086, (408) 730-0131

Published by Hitchcock Publishing Co.
Wheaton, IL, President, Loren M. Walsh
Phone: (312) 665-1000 Cable: HITCHPUB
Telex: 72-0404

One of the
ABC PUBLISHING
Companies

ABC Publishing, President, Robert G. Burton
1330 Avenue of the Americas
New York, New York 10019

Features

Career Management
26 Changing Jobs

Trends
29 'Proclamation of IBM PC Dominance Will Prove to Be Premature'

Inforum
32 The Micro Challenge to Data Security

Management
36 Training PC Users

Applications Development
46 A Productivity Lift for Life Savers

Management
48 COM & Information Resource Management

14th Annual Micrographics Usage Survey
52 MIS COMmand Grows

Micrographics
58 The New Face of Micropublishing

Technology Info
60 Smaller and Faster

Teleconferencing
64 A New Medium for Your Message

Communications
70 Networks Save Tax $s

Interview
78 Using Computers to Connect with People

Communications
80 OCR Unplugs Bottleneck

Office Automation
83 The Information Trail

For the Sake of Security
85 Back Doors and Loopholes

Financial Services Report
88 Computing from Micros to Fourth Generation Languages

Spotlight
90 Micrographics Ins and Outs

Departments

7 Reader Feedback
8 Editor's Perspective
10 Inside Info
24 IN Brief
42 Micro Business Products
74 Softwarewithal
76 Info Software
94 Products/Services Info
100 Literature
102 Bookcase
102 Plan Ahead
103 Classified
103 Ad Index
104 Arnie

INFOSYSTEMS (USPS-771-000) is published monthly. Copyright 1984 Hitchcock Publishing Company, a subsidiary of American Broadcasting Companies Inc. All rights reserved. No part of this publication may be reproduced or transmitted by any means without permission from the publisher. One year subscription rate $60.00 in the USA, $70.00 in Canada and Mexico. Single copy rates: $5.50 in the USA, $6.00 in Canada and Mexico. For international subscriptions, contact Reliable Information Publishing Company, PO Box 52, 6354 Vitznau, Switzerland. Printed in the USA. Second class postage paid at Wheaton, IL and additional mailing offices. Postmaster: Return form 3579 to INFOSYSTEMS, Hitchcock Publishing Company, Hitchcock Building, Wheaton, IL 60188.

ABP
BPA

Microcomputers

Does IBM get help from MIS in 'selling' to top corporations?

Could it be that data processing (DP) professionals and management information systems (MIS) executives are somewhat responsible for the IBM PC's phenomenal success in the Fortune 1000 companies? Harold Kinney, vice president of Future Computing of Richardson, TX, sees a connection.

"There's no doubt that data processing and MIS people are the single most influential group in the corporation when it comes to deciding which personal computers will be accepted and supported," says Kinney. "And IBM and MIS go way back together, about 20 years to be exact."

Actually, Kinney says we may be observing something of a "cyclical effect," a trend feeding upon itself. The MIS executives may have made their original PC purchases based on the strength and comfort of the IBM name. But as IBM announced more PC compatibility with its mainframes, sales increased. And meanwhile, reinforcements have come from the rapid growth of the PC-compatibles market.

"It's hard to say who is influencing whom," says Kinney, "whether the DP/MIS support has made the IBM PC more popular in corporations; or whether the long-standing popularity of IBM has swayed the DP community and persuaded them to choose the PC over other brands." The truth is probably somewhere in between, he concludes.

At any rate, Kinney notes that compatibility with the IBM PC has become an unofficial standard for Fortune 1000 firms which will buy more personal computers in 1985 than were sold to all major US corporations before 1984.

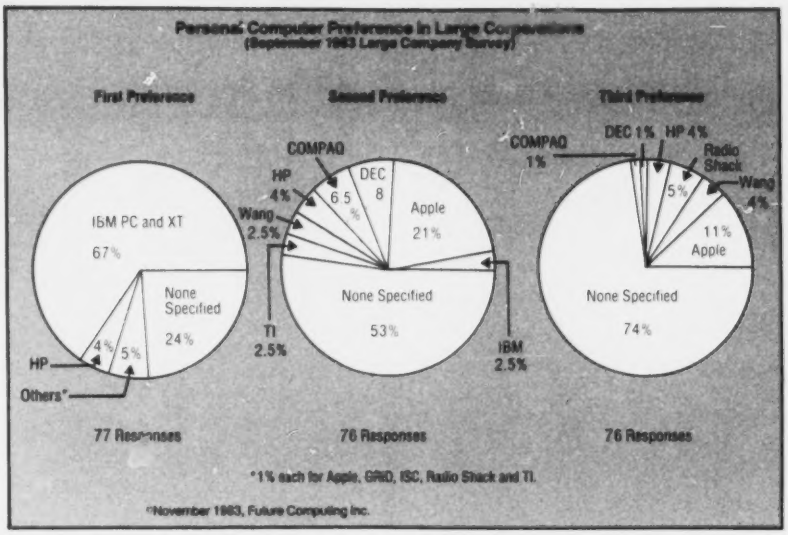
A recent study by the research firm of the 2,000 largest corporations found the IBM PC the leader in installed base (58 percent) and in average installation size (30 units per firm). Future Computing puts IBM's 1983 share of the large corporation market at 66 percent. By 1988, as more companies offer IBM PC-compatible units, IBM's share will drop to 60 percent. The PC-compatibles will have 30 percent of the market.

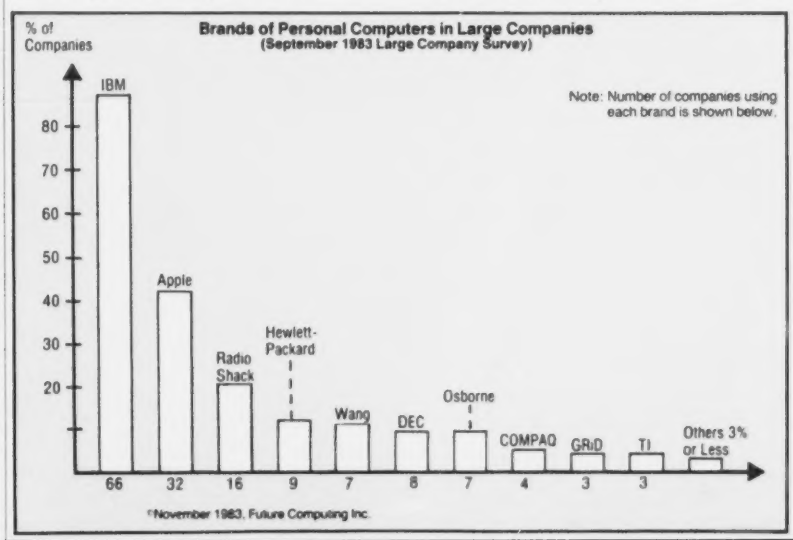
Kinney does not expect Apple Computer's recently introduced "Macintosh" to compete significantly with IBM. It is a "technologically delightful machine," he says.

"The Macintosh is not expandable; it has no color; and the keyboard is not as good as it should be," notes Kinney. "However, if Apple gives it MS-DOS windows and communications ability, it may go farther than we expect."

On the other hand, Kinney thinks the new Hewlett-Packard (HP) 150 personal computer will be a machine to watch. It represents a "strong departure" for HP and is being marketed as it should be, he says. He speculates that one thing that may spur sales for the new system is that Hewlett-Packard, like IBM, has the confidence of many MIS professionals.

—WLM





Sanyo, Toshiba top spreadsheet ratings

The popularity and relative low cost of microcomputers, combined with the electronic spreadsheet, have given financial planners a powerful new tool. For this reason, Auerbach Publishers, Pennsauken, NJ, has expanded its microcomputer ratings series to include electronic spreadsheet applications.

Info Industry

Datacomm market may soon see some 'fundamental dislocations'

A new report on deregulation from Strategic Inc. warns that the data communications market may soon see some "fundamental dislocations" stemming from the breakup of AT&T that will not only rattle the market but will cause headaches for the user community.

Strategic President Michael Killen explains that deregulation has caused an extremely unstable marketing environment due to a major realignment of equipment distribution channels and a restructuring of how services are provided to the customer. He also thinks that Congress has "virtually ignored" many of the public policy issues raised by deregulation such as the concept of universal service (the right of everyone to have access to the phone at a reasonable price) and the quality of networks.

Killen fears the quality of networks is now likely to deteriorate to the point that the user may hear static, the fading in and out of voices, and broken sounds on the line.

"There's probably going to be a reduction of quality when Bell Telephone no longer switches all the calls," says Killen. "As MCI, Sprint and others compete for Bell's old customer base, the quality will deteriorate to the point that users will look around more intensely for their needed transmission services, and will become more selective in their choice of vendors."

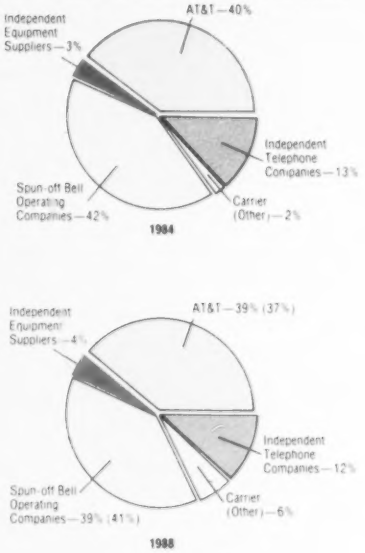
One of the "fundamental dislocations" that Killen identifies is a change in the way things are built. For example, in the past, telecommunications equipment was built to have a long life cycle, with an emphasis on quality. That's because the telephone industry bore the responsibility for universal service and thus wanted to avoid the expense of as many service and repair calls as possible.

Now, the emphasis is on price, which Killen thinks may cause some manufacturers to dislocate jobs to Hong Kong and other places of low-cost labor. Thus there will be not only a lower quality of equipment, but possibly an upheaval in the job market.

And some new jobs may emerge. Killen predicts that there will be a new classification of professionals in the large corporation charged with analyzing telecommunications and data communications needs for the company.

"There will soon be such a quantity and complexity of choices that someone will be needed to study the problem full-time," says Killen.

Relative Shares in Communications Market



Source: Strategic Inc.

Meanwhile, as many people leave AT&T and Bell Telephone, the unions will find themselves with fewer members. This may have a positive effect on the old-line work force.

"It wouldn't surprise me to see the unions putting pressure on their workers to be more productive and to accept automation," notes Killen.

Still another dislocation may be in the area of price. As the price of local services goes up, and the cost of transporting data becomes higher, people may start investing more money in local storage equipment and faster modems, so that data can be transferred more quickly.

But perhaps the major influence that will drive this market for the rest of the decade will be the tremendous proliferation of end-user equipment. Killen foresees that there will be a growing hodgepodge of ill-matched equipment, while users are trying to transmit and communicate more and more with everyone else.

"If Bell doesn't act fast enough, we might see a big corporation like IBM buying a cable TV company, just to make sure that its end users can communicate," says Killen. —WLM

For more information on this report Enter No. 7 on the Reader Information Card.

Software

Researcher develops text-oriented DBMS

How are xerography, typing correction fluid, protective tiles for the space shuttle, and a relational data base management system (DBMS) called DM related? All these things have been developed by Battelle Columbus Laboratories, the Ohio-based division of the renowned, independent research organization, Battelle Memorial Institute.

Battelle, which was founded as a nonprofit organization through a grant from a will, must bring in revenues to fund further research and to pay real estate and other taxes. A year ago, Battelle established a Software Products Center (SPC) under Mike Tickson as a commercial venture to market, sell and support software developed and used successfully within the organization.

DM (Data Management system) is the first software product introduced under the auspices of the SPC. It is not, however, the first software product developed by the organization.

Battelle's Basis was developed in 1969 as a project for the federal government. Tickson describes Basis, "a fairly mature system," as a completely English language, high-volume text retrieval system that allows single-key retrieval of millions of records almost as quickly as other systems retrieve thousands.

It is used by a large number of Fortune 500 companies, the information services industry, government agencies and publishers. "And it is the top system in litigation support," says Bill Griffith, manager, Basis products office.

Tickson pointed out to INFOSYSTEMS that Basis and the new DM system "are two completely different products except for textual strengths. Many DBMSs come from the other end of the spectrum, managing numerical data, but DM has a strong orientation toward text."

A real coup for Battelle was Control Data Corp.'s (CDC) decision to license DM for use with its new line of virtual machines to be announced later this year. Tickson explains, "Having developed products in-house for Battelle's own use, we suspected that our internal review of DM might be biased." But DM was checked out by CDC's

INFOSYSTEMS' 14th Annual Micrographics Usage Survey

MIS COMmand Grows

MIS/DP departments report increased responsibility in micrographics operations and system design.

By Karen G. Beagley and Wendelin J. Colby
Assistant Editors

Management Information Systems/Data Processing (MIS/DP) departments report increased levels of responsibility in micrographics operations and system design, according to INFOSYSTEMS' 14th annual survey of micrographics usage.

Nearly 70 percent of the respondents indicated that MIS/DP is in charge of micrographics operations in their organizations. Over 68 percent report that MIS/DP is primarily responsible for designing their micrographics systems. Another 66.3 percent said MIS/DP recommends which equipment will be purchased.

Usage increases

The survey conducted by Hitchcock Marketing & Research Services, Wheaton, IL, was mailed to 7,460 persons last December and received 1,969 replies, a 26.4 percent retur... Of the respondents, 34.4 percent currently use micrographics.

One respondent noted that effective micrographics is preceded by improved records management. Most companies seem to be moving to the micrographics area as costs go down. Another respondent stated, "We would like the convenience of our own COM system; however our volume does not justify the cost as we are a small company. The service company provides our size film — a valuable service."

About 19 percent of the respondents said the user group designs the micrographics system, followed by 12.5 percent reporting that this is a service bureau's responsibility. Micrographics vendors themselves design the system 9 percent of the time. This represents a decline from 13 percent of the cases last year.

The office services staff shows more influence in recommending equipment type (14.8 percent) than in designing systems (10.2 percent) or in taking charge of operations (11.9 percent).

Who Is in Charge of the Micrographics Operation

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
DP Department	38.8	47.0	39.5	39.7	41.2	47.3
Management Information Systems (MIS)	*	*	13.1	16.3	20.0	22.5
User Group	13.6	18.5	23.1	21.4	18.5	14.3
Records Manager	11.2	16.5	12.8	16.0	14.6	13.0
Office Services Staff	16.8	19.7	13.4	10.8	13.5	11.9
Micrographics Dept.	6.3	11.5	7.1	10.4	8.1	8.4
Systems Group	4.9	6.7	5.6	5.0	5.6	3.3
Other	19.0	15.6	11.9	14.9	12.3	9.9

*In 1979 and 1980, the MIS Department was not included, but the DP figure could be considered the combination of DP and MIS.

Concerning approval of expenditures, financial management (31.2 percent) has moved ahead of President/Vice President/General Manager/Chief Executive Officer (29.4 percent) this year for the first time since 1981. MIS/DP involvement combined has increased its role in approvals to 46.2 percent from 41.2 percent last year.

Who Designs the Micrographics System(s)

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
DP Department	43.6	47.3	36.3	32.8	38.4	43.9
Management Information Systems (MIS)	*	*	16.1	20.5	20.0	24.3
User Group	21.1	23.9	21.1	19.8	18.9	19.4
Service Bureau	9.4	8.7	8.3	8.9	9.5	12.5
Records Manager	13.2	15.7	10.4	16.9	11.6	12.1
Systems Group	19.4	21.5	12.8	18.9	15.5	11.2
Office Services Staff	17.8	16.7	13.7	10.5	10.5	10.2
Micrographics Dept.	12.6	13.1	8.6	12.3	8.4	9.3
Vendor	10.8	10.5	12.5	10.9	13.0	9.0
Consultant	5.5	5.8	4.5	4.1	4.2	2.6
Engineering	6.3	4.4	4.8	5.7	5.5	2.6
Other	11.5	11.3	8.0	11.4	6.5	6.1

*In 1979 and 1980, the MIS Department was not included, but the DP figure could be considered the combination of DP and MIS.

Who Recommends the Type of Micrographics Equipment to Be Purchased

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
DP Department	35.0	45.2	32.9	32.6	36.9	40.7
Management Information Systems (MIS)	*	*	14.2	18.4	22.0	25.6
Office Services Staff	16.9	19.8	18.8	11.2	13.1	14.8
User Group	16.0	16.4	19.1	17.0	18.5	13.4
Service Bureau	3.9	5.5	7.4	3.0	12.7	13.0
Micrographics Dept.	12.5	14.6	8.9	12.4	9.5	10.3
Records Manager	11.2	15.0	12.6	16.8	10.8	10.3
Systems Group	13.3	15.0	9.5	11.2	9.7	6.8
Consultant	3.6	3.5	2.8	3.5	5.6	5.1
Purchasing Department	10.4	10.7	5.8	9.1	2.4	2.9
Other	13.1	14.4	11.7	13.5	6.9	7.9

*In 1979 and 1980, the MIS Department was not included, but the DP figure could be considered the combination of DP and MIS.

Banking leads other industries in micrographics usage at 82 percent. Construction, manufacturing, communications, retail and financial industries reported usage more than 70 percent of the time.

Archival storage continues to be the single largest application of micrographics with 46.6 percent. Active or daily reference follows at 31.5 percent and semi-active reference at 21.9 percent.

Although about 60 percent of the respondents indicated they would maintain their present systems during 1984, 27 percent of the respondents said they would expand in applications such as converting to microfiche and purchasing their own equipment.

Types of services

About 40 percent of the respondents said all their micrographics needs are handled by service organizations. Ten percent said most of their needs are handled through a service bureau and another 11.9 percent said most of their work is split between in-house and a service bureau. Nearly 17 percent handle all their micrographics needs in-house leaving about 83 percent to use a service bureau to some extent.

Computer-output-microfilm (COM) dominated the types of micrographics services being used. Seventy-two percent of the respondents use magnetic-media-to-film-conversion. Filming documents is the second most popular choice at 36 percent. Nearly 67 percent of the respondents do not have COM equipment in-house, but 13 percent plan to install equipment within

Who Approves Micrographic Expenditures from a Budget Standpoint

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Financial Management	24.7	34.2	35.0	27.4	27.7	31.2
President/VP/GM/CEO	39.7	34.2	32.6	36.6	33.6	29.4
DP Management	NI	31.7	29.7	20.0	25.2	27.0
User Department	32.3	22.0	24.0	24.1	22.9	20.3
MIS Management	NI	*	*	12.9	16.0	19.2
Micrographics Dept.	NI	9.3	4.2	6.2	4.4	5.1
Other	18.3	9.8	7.7	10.8	10.5	8.7

*In 1980 and 1981, the MIS Department was not included, but the DP figure could be considered the combination of DP and MIS.

Average Approximate Expenditures on Micrographics in the Next Year

Film	1979	1980	1981	1982	1983	1984
No. Spending $1 >	56.5%	60.7%	45.7%	NA	41.1%	47.7%
Average Dollars	$17.0	$23.5	$16.9	$22.2	$24.4	$ 44.7
Equipment						
No. Spending $1 >	46.3%	52.2%	42.6%	NA	33.3%	35.0%
Average Dollars	$32.9	$32.2	$23.9	$37.9	$36.2	$ 41.6
Supplies						
No. Spending $1 >	53.7%	57.4%	41.1%	NA	26.7%	41.9%
Average Dollars	$ 7.3	$13.2	$ 9.4	$ 9.0	$18.6	$ 18.6
Services						
No. Spending $1 >	78.7%	75.0%	72.1%	NA	71.1%	77.8%
Average Dollars	$14.8	$23.9	$17.2	$19.6	$28.5	$ 26.2
Micrographics Salaries						
No. Spending $1 >	NI	NI	32.6%	NA	34.4%	29.2%
Average Dollars	NI	NI	$50.0	$76.6	$51.6	$123.3
Total For Next Year						
No. Spending $1 >	100%	100%	100%	100%	100%	100%
Average Dollars	$42.1	$56.6	$50.5	$85.6	$79.0	$100.1

Average Approximate Expenditures on Micrographics in Past Year

Film	1979	1980	1981	1982	1983	1984
No. Spending $1 >	55.3%	59.5%	43.3%	NA	35.4%	46.1%
Average Dollars	$16.0	$19.5	$13.0	$15.9	$20.4	$ 37.2
Equipment						
No. Spending $1 >	49.2%	54.9%	45.4%	NA	31.6%	35.9%
Average Dollars	$23.2	$25.7	$18.3	$35.3	$34.6	$ 33.7
Supplies						
No. Spending $1 >	51.9%	55.9%	36.2%	NA	24.5%	40.8%
Average Dollars	$ 6.6	$10.7	$ 8.5	$14.5	$14.7	$ 17.3
Services						
No. Spending $1 >	80.7%	74.5%	70.9%	NA	70.3%	79.3%
Average Dollars	$16.5	$19.7	$15.4	$17.3	$24.6	$ 26.5
Micrographics Salaries						
No. Spending $1 >	NI	NI	27.7%	NA	30.2%	27.4%
Average Dollars	NI	NI	$40.8	$62.8	$44.5	$113.3
Total For Past Year						
No. Spending $1 >	100%	100%	100%	100%	100%	100%
Average Dollars	$37.6	$46.4	$39.2	$74.2	$63.9	$ 88.3

How Micrographics Are Used

Active or Daily/Reference	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Percent Using (1% >)	NI	NI	75.2	83.9	75.9	78.0
Average % (Incl. 0)	NI	NI	34.3	40.9	31.2	31.5
Semiactive Reference						
Percent Using (1% >)	NI	NI	80.3	79.5	80.6	80.9
Average % (Incl. 0)	NI	NI	25.3	24.2	24.4	21.9
Archival Storage						
Percent Using (1% >)	NI	NI	81.9	84.1	88.5	90.9
Average % (Incl. 0)	NI	NI	40.4	34.9	44.4	46.6

Planned Usage of Micrographics in the Next Year

Evaluate Its Potential Use	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Yes	32.6	34.1	28.3	29.7	28.5	33.0
No/No Answer	67.4	65.9	71.6	70.3	71.5	67.0
Install Micrographics						
Yes	5.8	5.8	1.4	3.8	3.7	5.4
No/No Answer	94.2	94.2	98.5	96.2	96.3	94.5
Use A Service Bureau						
Yes	NI	NI	4.8	3.9	6.4	6.9
No	NI	NI	79.5	96.1	93.6	93.1

two years. About 19 percent already have COM equipment in-house. One respondent reported that using an outside service for microfiche caused "nothing but headaches and problems until we brought it in-house."

Computer-assisted retrieval systems (CAR) show an opportunity for growth. About 28.5 percent of the respondents may use CAR in two to five years and 3.8 percent within one year. Over 10 percent of the respondents presently use such equipment in-house. A standalone retrieval unit is the most popular method. More than 60 percent of the respondents use it.

Computer Disks/Computer Data Bases lead in alternate means in which to store documents at 39.1 percent. Laser disks, video disks and magnetic tape also hold a share of the market at 17.4, 15.2 and 13 percent respectively.

Paper is being used by 39.1 percent of the respondents for active, 41.2 percent for semiactive and 39.5 percent for archival storage. Computer Disks/Computer Data Bases come in second at 34.5 percent for active use. But for both semiactive and archival storage, central filing ranks second with 37 and 36.3 percent respectively.

Most of the respondents believe that micrographics does indeed help them in their offices. One company even created two new offices with the space saved from the paper storage and improved the procedure of locating records.

Not everyone sees micrographics as a growing trend, however. One respondent said, "Micrographics is a dead technology which has no future, including archival storage past 1990."

But another respondent claimed, "Our user departments were first reluctant to work with COM. Now they would have a difficult time going back to hard copy." (IN)

For an extra copy of this article, please enter No. 20 on the Reader Information Card.

How Micrographics Needs Are Handled

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
All Handled by a Service Organization	32.5	30.3	34.7	30.5	36.0	39.8
Most In-House	20.3	20.8	14.9	19.6	14.9	21.6
All In-House	23.7	23.3	21.0	29.6	24.0	16.7
Equal Split Between In-House and Outside	11.8	13.3	14.9	10.2	12.0	11.9
Most at a Service Organization	11.8	12.3	14.6	10.2	13.2	10.0

Types of Micrographics Services Used

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Magnetic-Media-To-Film-Conversion (COM)	71.3	74.4	45.8	61.1	69.3	71.1
Filming Documents	36.1	39.0	41.7	41.0	41.2	36.2
Processing Film	28.5	35.0	37.5	29.3	26.6	27.8
Duplicating Film	24.8	26.9	37.5	24.4	24.6	24.0
Storage	6.6	8.2	16.7	7.1	7.3	6.8
Magnetic-Media-To-Paper Conversion	2.7	2.2	8.3	4.6	5.6	4.1
Film-To-Paper Conversion	4.5	4.0	20.8	5.7	7.0	3.6
Other	NI	NI	NI	4.2	2.0	1.9

Computer-Output-Microfilm (COM) Usage In-House

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Yes, In-House	16.9	20.4	10.9	20.9	16.1	18.6
No, But Plan To Have Within Two Years	6.8	7.2	8.4	12.7	14.5	13.1
No, And Do Not Plan To Have	66.3	72.4	74.6	61.6	68.2	66.8
No Answer	0.0	0.0	6.1	4.8	1.2	1.5

Other Methods to Store Documents

	Now Being Used %	Considering Using %
Paper/Hard Copy/ Computer Printouts	37.3	21.7
Central Filing/ Filing Cabinets	36.4	17.4
Magnetic Tape	29.5	13.0
Computer Disks- Computer Data Base	27.5	39.1
External Warehousing/ Off-Site Storage	3.8	4.3
Word Processing System	2.3	4.3
Optical Memory System/ Photo-Optic	2.0	21.7
Electronic Report/ Retrieval System	1.4	8.7
Laser Disk	1.4	17.4
Data Base Management Systems	1.2	2.2
Automated Records/ Management System	0.9	4.3
Video Disks	0.6	15.2
Computer Interactive Graphics	0.6	2.2
Engineering Drawings	0.6	0.0
Federal Records Center	0.6	0.0
Vendor Systems	0.3	0.0

Computer-Assisted Retrieval Systems (CAR) Usage

	1979 %	1980 %	1981 %	1982 %	1983 %	1984 %
Yes, Presently Use	8.5	9.4	7.0	12.3	12.4	10.3
No, But Plan To Use Within One Year	4.0	5.1	3.9	5.9	3.7	3.8
No, But May Use In 2 To 5 Years	29.6	31.1	31.8	30.3	27.7	28.5
No, And Do Not Plan To Use	43.8	42.7	46.1	41.8	49.5	51.8
Do Not Know What It Is	7.5	7.6	6.1	6.2	5.1	4.0
No Answer	6.5	4.1	5.0	3.5	1.6	1.5

Complete Reports Available

Complete spiral-bound copies of the backup summary of the survey are available for $50. This shows a detailed breakdown, by industry, for each of the 19 questions asked on the survey. Check or company purchase order must accompany all orders. Mail request to INFOSYSTEMS Micrographics Survey, Research Department, Hitchcock Publishing Co., Hitchcock Building, Wheaton, IL 60188.